Data Analytics Through Foundational EIM

Texas Health and Human Services
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Your Presenters Today

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Predicting Potentially Preventable Events

Johnny is:

- **A 12 year old child in foster care**
- **Enrolled in Medicaid**
- **Moves frequently because he is in foster care**
- **Johnny has asthma and is a Type 2 diabetic**

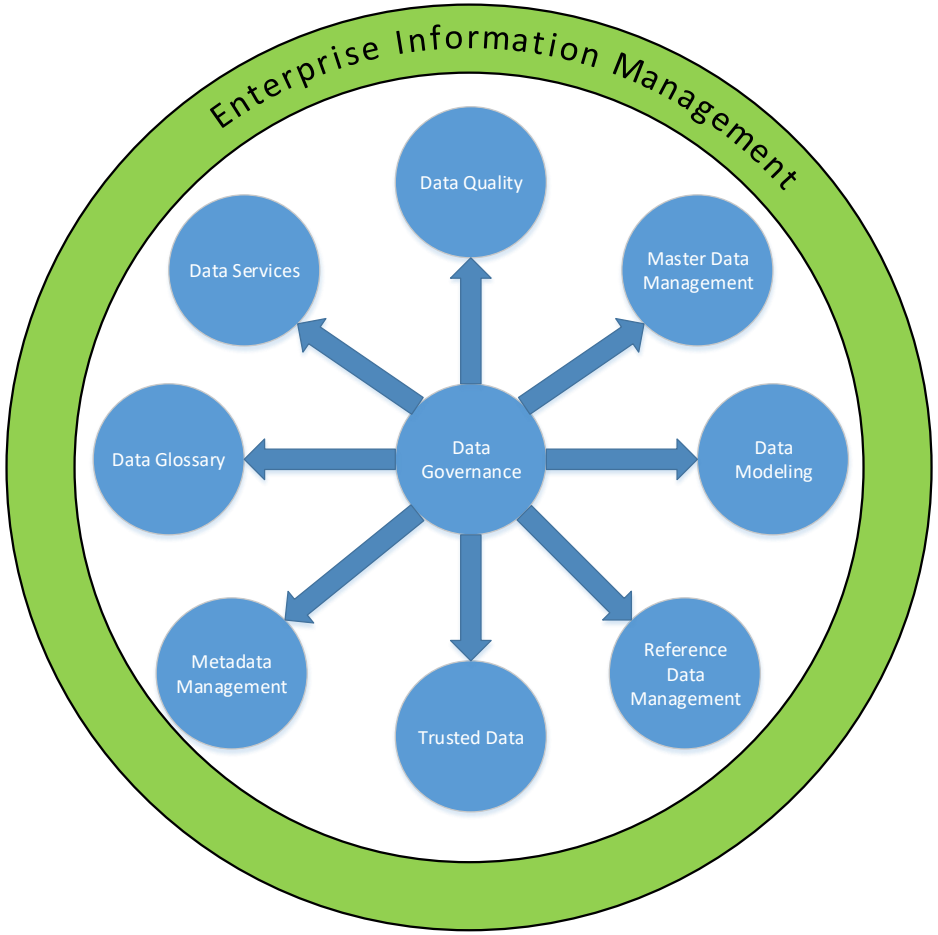
If we want to predict whether or not Johnny is headed for an unnecessary, or preventable, inpatient hospitalization, what else do we need to know?

Disparate Data Sources

Examples of HHS data that an analyst may need to link for analysis:

- TIERS client eligibility
- Medicaid client enrollment
- Medicaid provider enrollment
- Acute care encounters
- Behavioral and Mental Health data
- Long Term Supports and Services claims
- Vendor Drug claims
- Impact data
- Child Placing Agency data
- WIC data
- Other Clinical data

Enterprise Information Management Framework



- **Enterprise Data Governance (EDG) is the formal orchestration of people, process, and technology to enable an organization to leverage data as an enterprise asset.**
- **Enterprise Information Management (EIM) is an integrated discipline for structuring, describing, and governing information assets across organizational and technological boundaries to improve efficiency, promote transparency, and enable business insight.**

EIM: Master Data Management

The goal of Master Data Management(MDM) is to create the "Best Version of the Truth" by resolving the identity of a individual across multiple source data systems.

- **Analysts are able to use the MDM repository as a Master Index to locate subjects across source systems, enabling more complex and robust analytics and streamlining data sharing across organizational units**

- **Source data systems stewards can use Master Data to resolve data quality issues in their own source systems; source systems in turn enhance the MDM repository by integrating more and new information about members and providers**

- **Profiling Master Data exceptions can facilitate the discovery and remediation of data quality issues in source systems**

More Complete View of Johnny's Health

By having access to clean, accurately linked and integrated data from multiple sources, we can have a total view of Johnny.

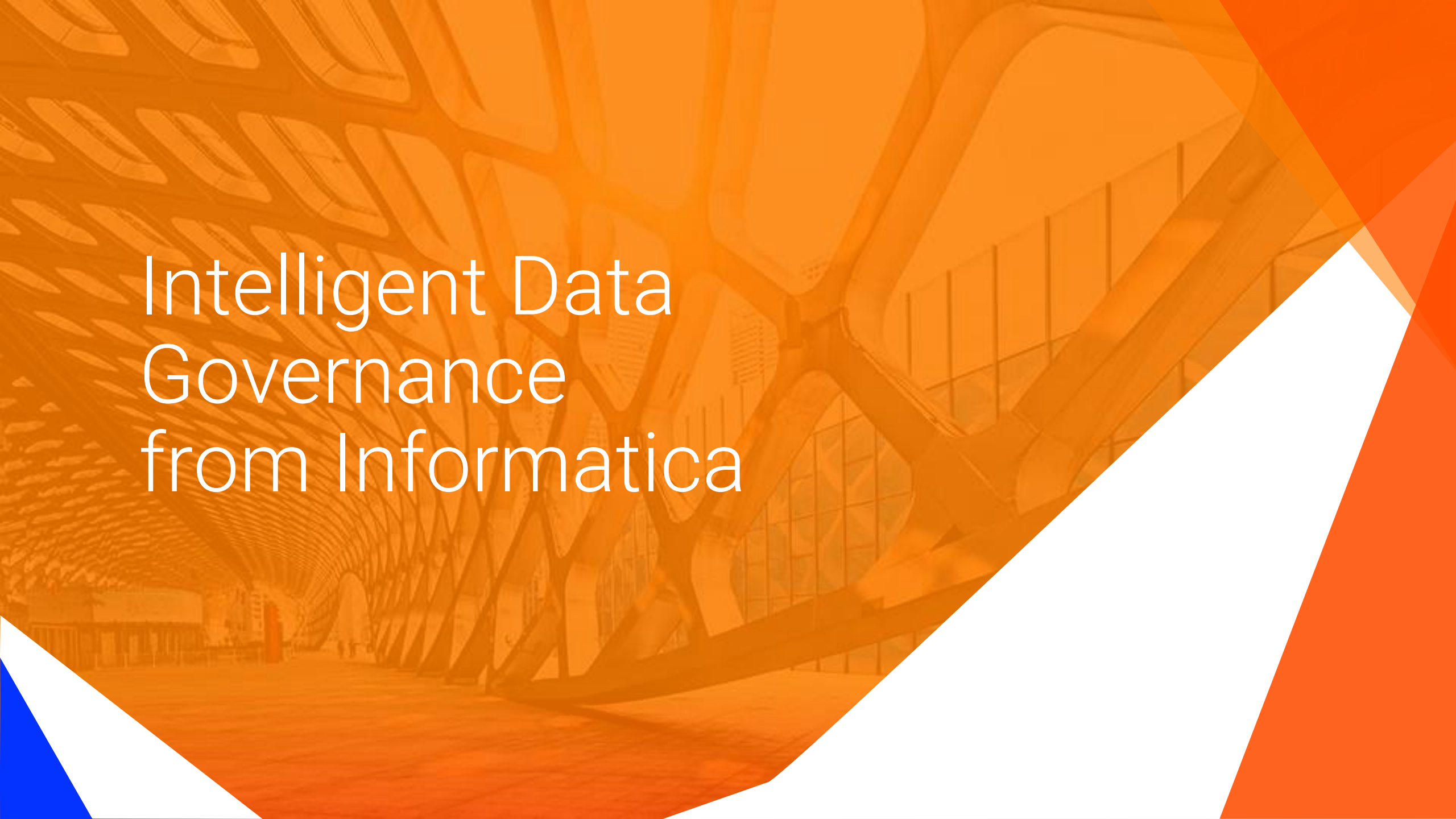
- **Johnny has asthma, but infrequently fills his inhaler prescription.**
- **Johnny is diabetic. We now know his BMI > 30 and blood sugar is over acceptable limits.**
- **Johnny was diagnosed with PTSD when he was 10.**
- **Johnny hasn't seen his PCP for 18 months.**
- **Johnny has moved homes 3 times in 12 months.**
- **Johnny had 3 ER events in the last 12 months.**
- **Johnny was admitted for 2 days after 1 of those ER events.**

Predictive Analytics

Now that we have a more robust view of Johnny, analyses can be done to develop data models to predict the likelihood of a potentially preventable event, such as an inpatient hospitalization.

What can we do with that information?

- **Medicaid health plans or CPS case managers can be notified about individual members at risk for potentially preventable events.**
- **HHS programs can target outreach and education efforts to geographical areas with the greatest risk for potentially preventable events.**


Intelligent Data
Governance
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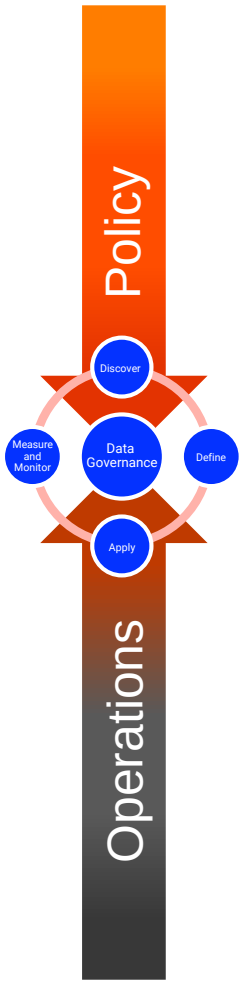
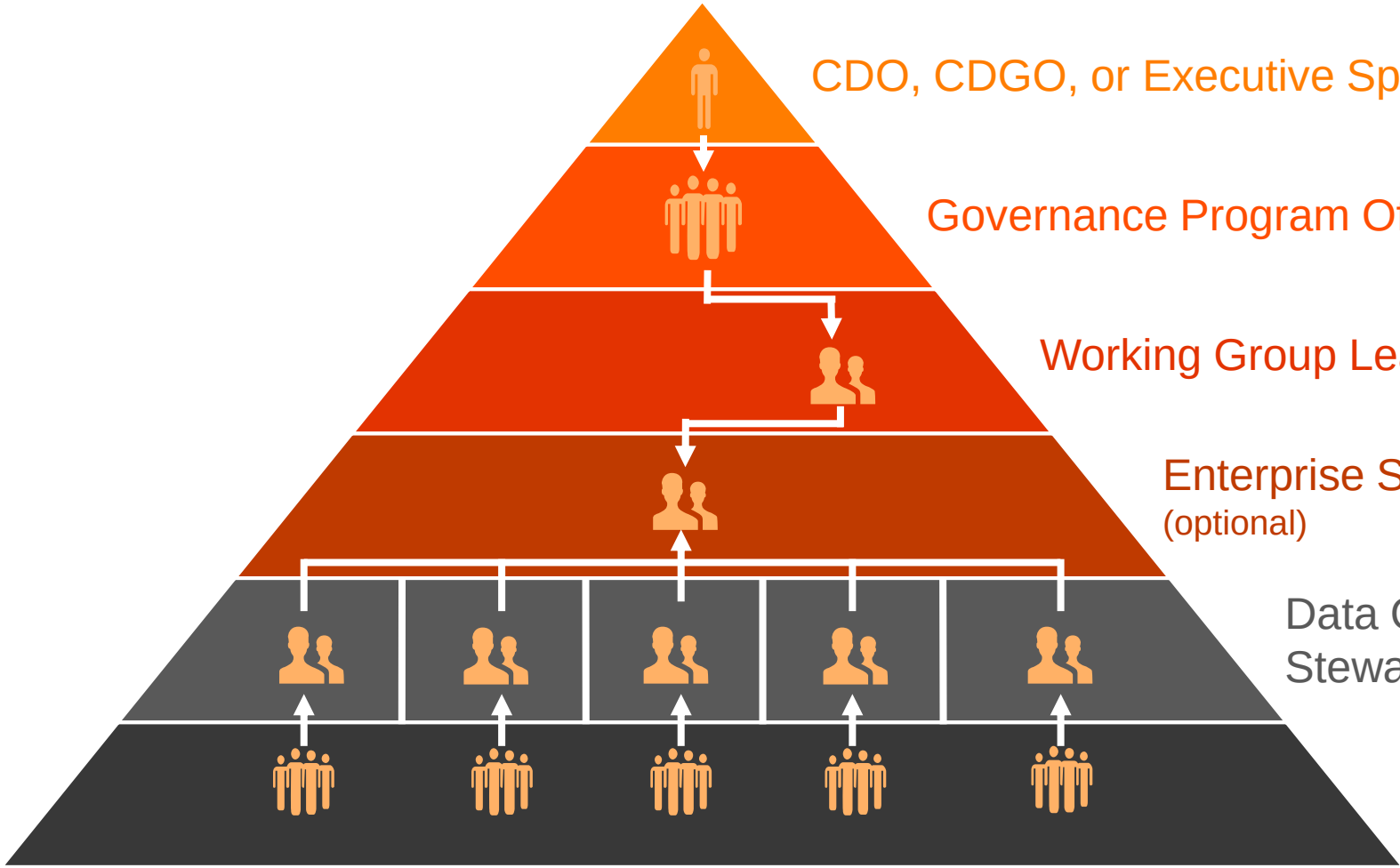
DATA
“The Truth is out there.”

Alignment across Business and IT Operation Tiers





CDO, CDGO, or Executive Sponsor

Governance Program Office

Working Group Leads

Enterprise Stewards
(optional)

Data Owner / Stewards (BUs)

Data Delivery
(IT + BU)

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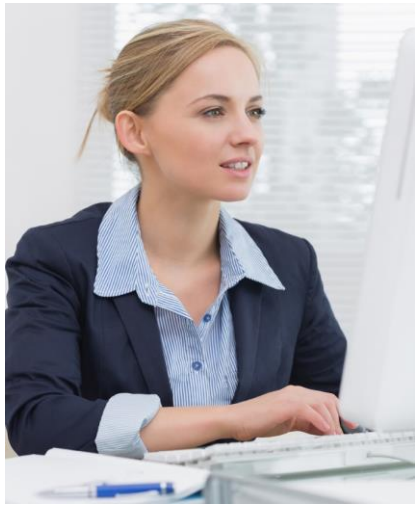
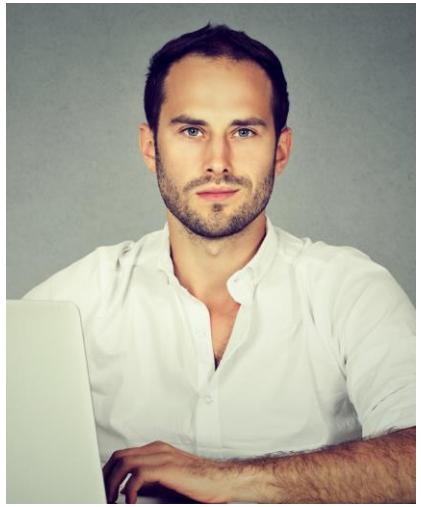
Intelligent Data Governance for Everyone



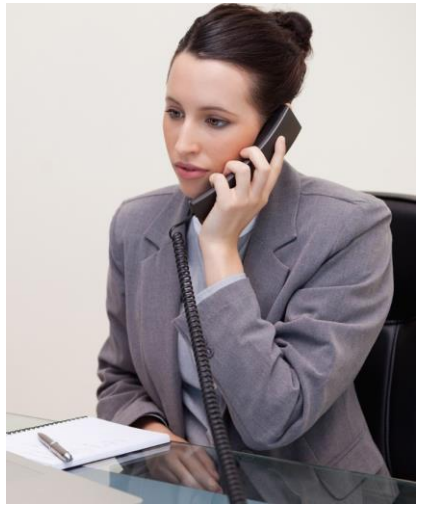
Data Governance Office

How can we implement data governance standards, facilitate change programs, monitor compliance?



Data Owner

How can I ensure data managed within application and supporting processes deliver value to the business?



Data Steward

How can I manage metadata for key enterprise data assets?

How do I assess and manage quality through the data's lifecycle

Data Consumer

How can I discover, understand and trust data required for my analysis?

Data Architect

How can IT enable business discover data assets with verified data quality and traceability?

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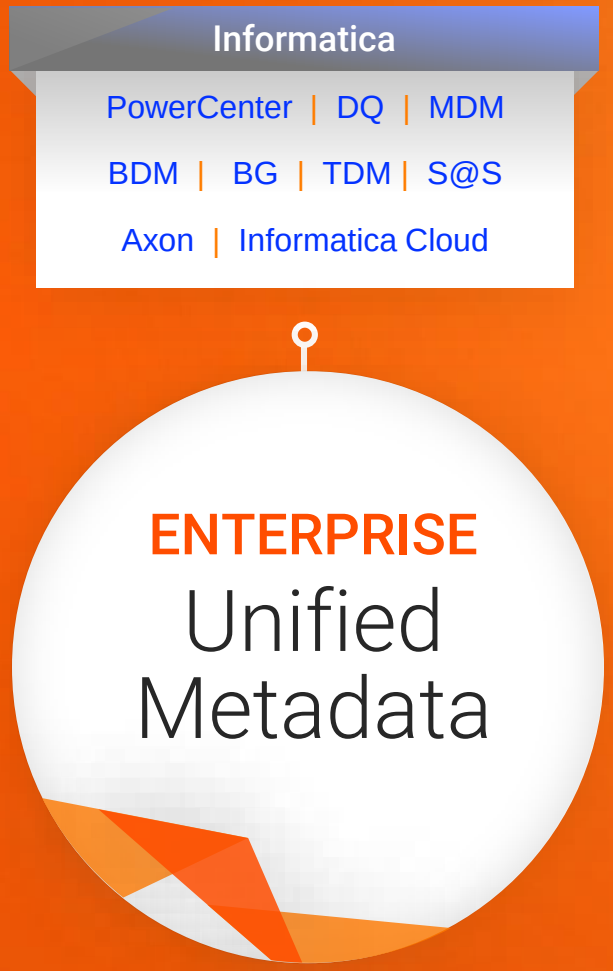
ENTERPRISE UNIFIED METADATA INTELLIGENCE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PowerCenter | DQ | MDM
BDM | BG | TDM | S@S
Axon | Informatica Cloud
ENTERPRISE
Unified
Metadata

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PowerCenter | DQ | MDM

BDM | BG | TDM | S@S

Axon | Informatica Cloud

Documents

MS Excel | MS Word

MS Powerpoint | Adobe PDF

Flat File | Email

Other ETL

IBM DataStage | Microsoft SSIS

Talend | Oracle Data Integrator

Big Data

Cloudera | HortonWorks

MapR | IBM BigInsights

AWS EMR | Azure HD Insight

Databases

Oracle | DB2 | Mainframes

SQL Server | Netezza | Greenplum

Teradata | Azure DW

Google Big Query | AWS RedShift

Cloud Platforms

AWS | Microsoft Azure

Google Cloud Platform

Applications

SAP R/3 | Salesforce

Oracle | MS Dynamics | Workday

Business Intelligence

Tableau | IBM Cognos

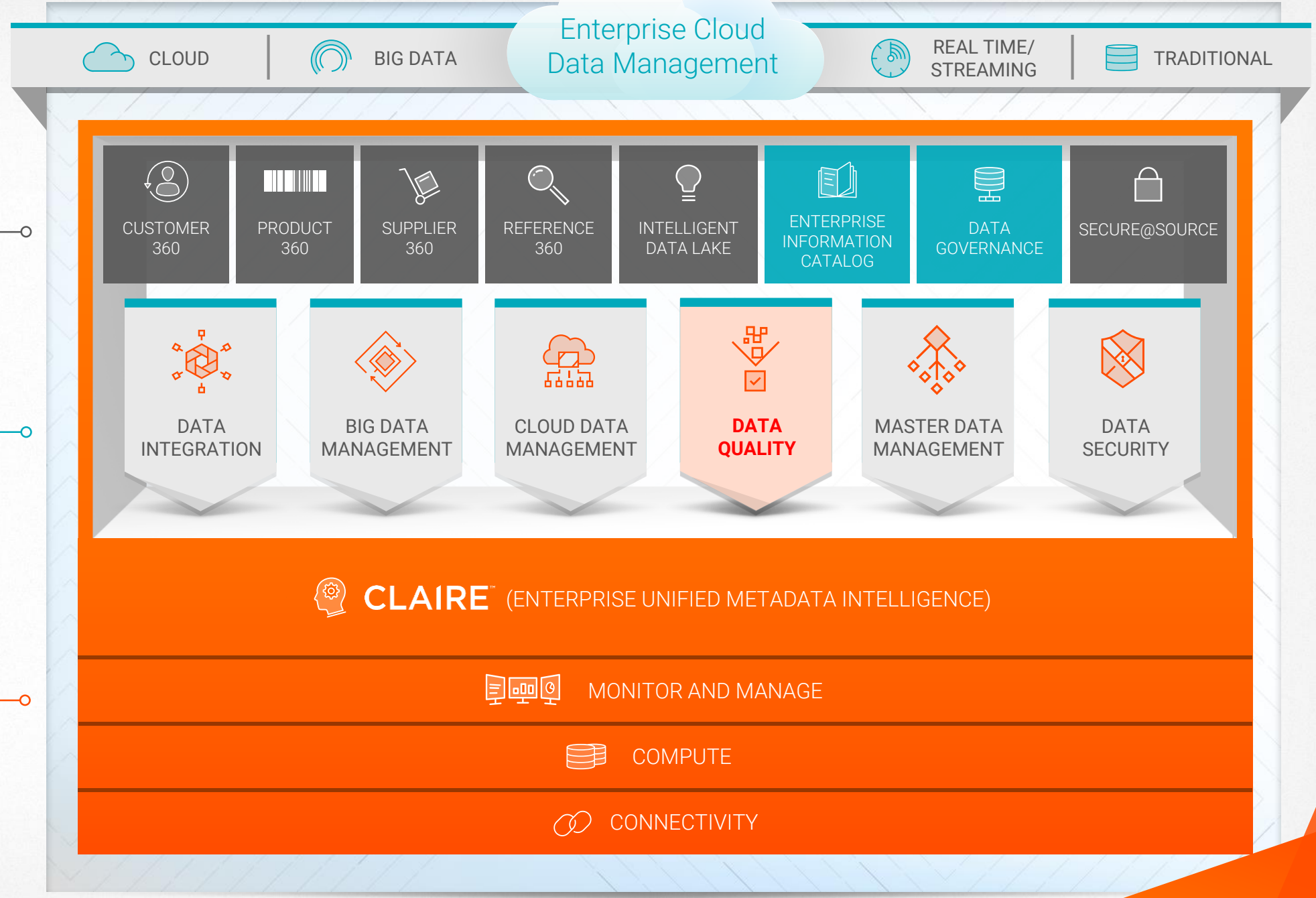
SAP BusinessObjects

Microstrategy | OBIEE

Solutions

Products

Intelligent
Data Platform



5 Principles of Effective Data Governance

1. **Enable collaboration** across all data stakeholders.
2. Connect data governance to **technical and operational efforts**.
3. Enable data governance stakeholders to act with confidence to **achieve measurable results**.
4. The data governance stakeholder **is always in control**.
5. Enable **all data consumers** in the organization to make meaningful changes.

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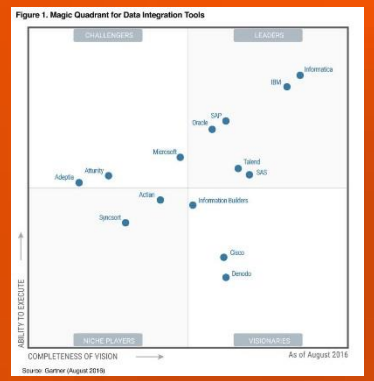
A leader in Six Gartner Magic Quadrants

Gartner MQ for Data Integration Tools **AUG 2016**



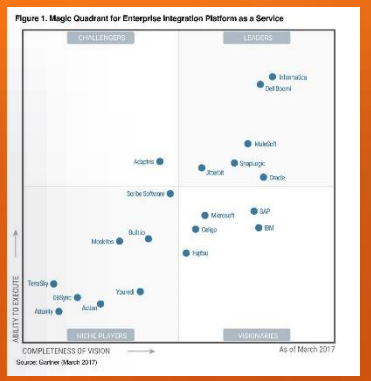
Gartner MQ for Metadata Management Solutions **AUG 2016**

Gartner MQ for Data Quality Tools **NOV 2016**

Gartner MQ for MDM Solutions **JAN 2016**

Gartner MQ for Structured Data Archiving and Application Retirement **JUNE 2016**

Gartner MQ for Enterprise iPaaS **MARCH 2017**



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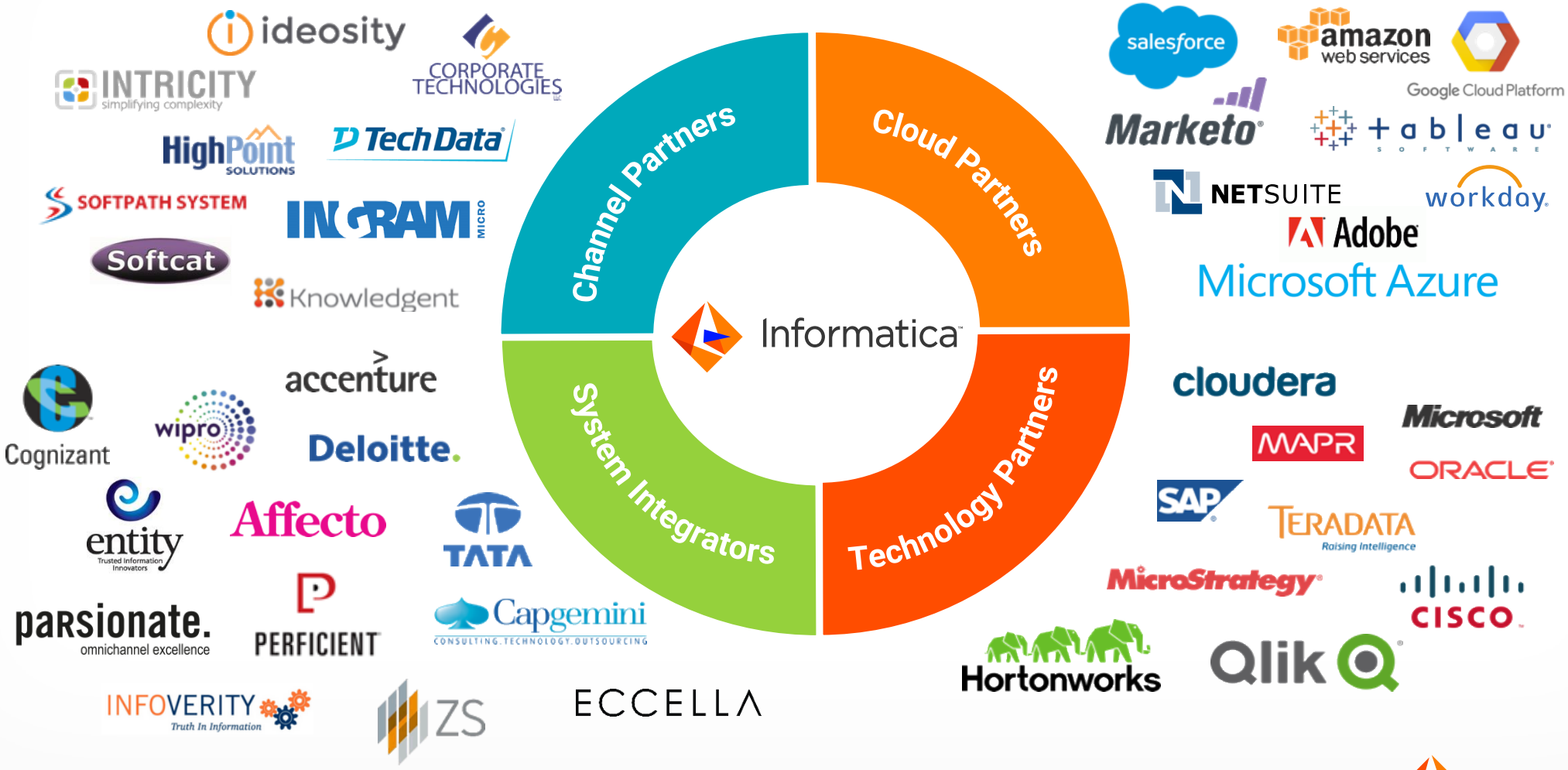
Global Ecosystem of Partners



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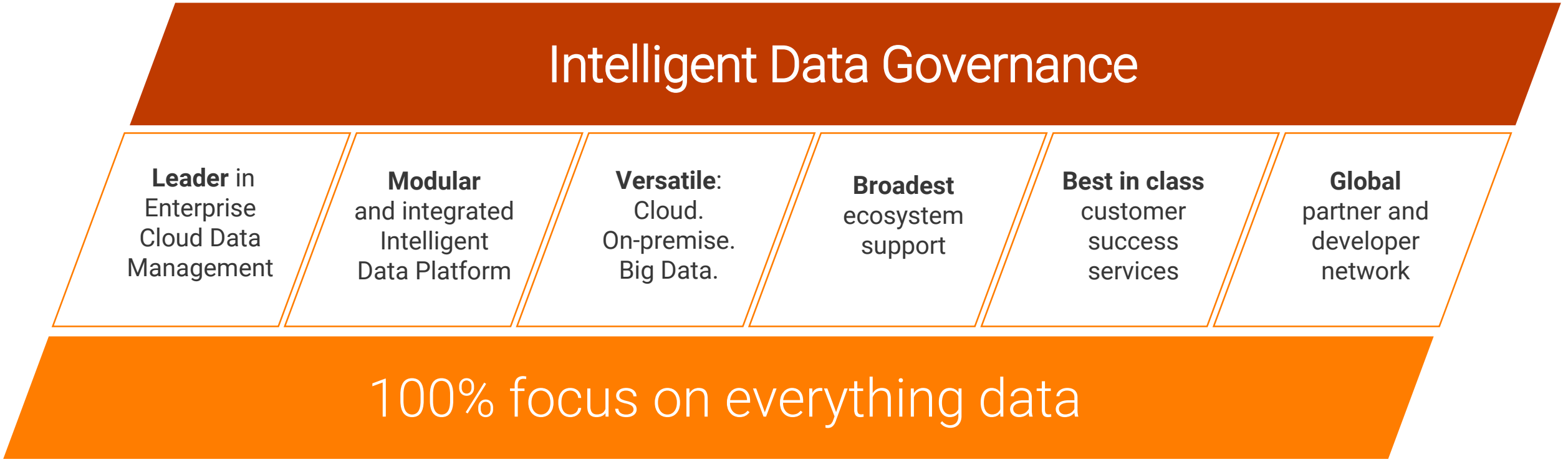
The Informatica Difference



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Thank you!

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